

**REMARKS**

No new matter is added by this amendment. Claims 1-26 remain in the application with claims 1 and 7 in independent form. Claims 8-26 have been amended.

**Claim Objections**

Claims 8-26 were objected to because their dependency is not correct. The Examiner noted that claims 8, 9, 17 and 19-26 should be dependent on claim 7; claims 10-16 should be dependent on claim 9; and claim 18 should be dependent on claim 17. Applicant has amended these claims to correct dependency as suggested by the Examiner. Specifically, the dependency of claims 8, 9, 17 and 19-26 were amended to be dependent on claim 7. The dependency of claims 10-16 were amended to be dependent on claim 9. The dependency of claim 18 was amended to be dependent on claim 17. It is respectfully submitted that these objections are believed to be overcome.

**35 U.S.C. §103(a) Rejections**

Claims 1 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eo et al. (United State Patent No. 6,901,032) in view of Rosevear (United States Patent No. 4,669,891) and Parker (United States Patent No. 6,310,547). The Examiner contends that Eo et al. discloses an apparatus for displaying time and the time for sunrise and sunset for positions on an analog clock face. However, the Examiner states that Eo et al. does not disclose the time for the beginning and ending of twilight; receiving and registering various positions based on a current coordinate position in latitude and longitude for a current calendar day; and pie-shaped sections on the analog clock face for twilight.

The Examiner relies on Rosevear for the time for the beginning and ending of twilight. The Examiner also attempts to equate a geographic position based on an area code disclosed in Rosevear with the coordinate positions in latitude and longitude of the subject application. The Examiner contends that it would have been obvious to one of ordinary skill in the art to have modified Eo et al. to display the time for the beginning and the ending of twilight and sunrise and sunset for each calendar day of the year for various coordinate positions based on the area code location disclosed in Rosevear.

The Examiner also contends that it would have been obvious to modify Eo et al. in light of Rosevear to present the time for twilight in shaded pie-shaped sections on an analog clock face “because a person having ordinary skill in the art would recognize that providing additional information in the form of twilight times would allow a traveling user to be advised of the light conditions at their destination point.”

Finally, the Examiner contends that Parker discloses a programmable device which calculates sunrise and sunset times based on location data which is input by the user in the form of latitude and longitude. The Examiner contends that it would have been obvious to modify Eo et al. to include the ability to designate a position based on latitude and longitude because “this ability would increase the functionality of the device to present twilight times in places that may not have area codes, thereby making the device more commercially desirable and increasing sales and profitability.”

Applicant respectfully submits that the Examiner has failed to establish the requisite *prima facie* case of obviousness. Specifically, the Examiner has failed to provide a teaching or motivation to make the combinations as suggested. The motivation to combine the cited references must flow from some teaching in the art that suggests the desirability or incentive to make the combination needed to arrive at the claimed invention. The mere fact that the cited references could be so combined would not have

made the combination obvious unless the cited references suggested the desirability of the combination. Further, even if the references could be combined, the Examiner has failed to show that the combination discloses each and every limitation as claimed in the subject invention.

***Claim 1***

Claim 1 is directed toward an apparatus for displaying time. The apparatus includes a memory for storing a day sequence of the time for the beginning and ending of twilight and sunrise and sunset for each calendar day of the year for various coordinate positions. As is known to those skilled in the art, the coordinate positions are finite positions which are based on latitude and longitude. When referring to [0012] of the present application, this is important because the time for the beginning and ending of twilight varies based on the geographic location and calendar date.

The apparatus also includes a receiver for receiving a current coordinate position in latitude and longitude, a current calendar day, and a current time. A register is operatively connected to the memory and the receiver for registering a current coordinate position in latitude and longitude, a current calendar day, and a current time.

Finally, a display is operatively connected to the register and the memory for presenting the current time on an analog clock face with pie-shaped sections for twilight. Referring to [0012] of the present application, twilight is a duration of time which “occurs either from daybreak to sunrise or from sunset to darkness.” Referring to [0017] of the present application, the pie-shaped sections for “twilight 22 have a first and a second boundary 28, 30 that define the duration of . . . twilight.” Also referring to [0017] of the present application, “the time duration between the first 28 and the second 30 boundaries represents the duration for twilight.”

***Claim 7***

Claim 7 is directed toward a method for displaying time. The method includes the step of storing a day sequence including times for the beginning and ending of twilight and sunrise and sunset for each calendar day of the year for various coordinate positions in a memory. As discussed above in claim 1, the coordinate positions are finite positions which are based on latitude and longitude.

A current coordinate position in latitude and longitude, a current calendar day, and a current time are received and registered. A stored day sequence is retrieved from the memory which corresponds to the registered current coordinate position and current calendar day.

The current time is presented on a circular clock face with pie-shaped sections for twilight. As discussed above in claim 1, and referring to [0012] of the present application, twilight is a duration of time which “occurs either from daybreak to sunrise or from sunset to darkness.” Referring to [0017] of the present application, the pie-shaped sections for “twilight 22 have a first and a second boundary 28, 30 that define the duration of . . . twilight.” Also referring to [0017] of the present application, “the time duration between the first 28 and the second 30 boundaries represents the duration for twilight.”

Both claims 1 and 7 require that the time for twilight and sunrise and sunset be displayed based on coordinate positions in latitude and longitude and pie-shaped sections for twilight be presented on an analog clock face. Unlike the time for sunrise and sunset, twilight is a span of time which represents the duration of time between daybreak to sunrise or from sunset to darkness. It is this span of time for twilight which is graphically

represented as the pie-shaped sections on the analog clock face. For an accurate representation of the times for twilight and sunrise and sunset, coordinate positions in latitude and longitude are used. None of the references disclose, teach, or suggest displaying the time for twilight and sunrise and sunset based on coordinate positions in latitude and longitude and presenting pie-shaped sections for twilight on an analog clock face. Therefore, such a combination of Eo et al., Rosevear, and Parker employs impermissible hindsight and does not consider the claimed invention as a whole. In other words, the claimed invention is being analyzed element by element as a roadmap to find the prior art components and the Examiner is discounting the value of combining these elements in a new way to achieve a new result. As is well known, the suggestion to combine references must not be derived by hindsight from knowledge of the claimed invention itself or in view of the Applicants disclosure.

Even further, those of ordinary skill in the art addressing the problems addressed by the subject application, i.e., determining the time for twilight and sunrise and sunset for various coordinate positions in latitude and longitude and displaying the time for twilight on an analog clock face, would not have been motivated to combine Eo et al. and Rosevear and Parker.

#### ***Lack of Motivation to Combine***

Eo et al. discloses a device for displaying time and the time for sunrise and sunset based on the month for a specific place (col. 2, ln. 18). Eo et al. discloses using the apparatus only for a “specific place” because the apparatus does not have the flexibility to be used in various locations. Eo et al. discloses a bottom plate with a fixed sunrise and sunset time designating section. Because the angle between the sunrise and sunset time designating section and a reference line vary based on the latitude, a different timepiece is

required for foreign countries (col. 3, ln. 22-35). A display presents the time for sunrise, sunset, and the current time on an analog clock face (col. 2, ln. 7). The time for sunrise, sunset, and the current time are indicated by lines which extend from the center of the bottom plate of the timepiece to the end portion of the bottom plate (col. 4, ln. 10). Eo et al. only discloses indicating the time for sunrise and sunset based on the specific location of the timepiece. Eo et al. does not disclose, teach, or suggest presenting any type of pie-shaped sections which represent time duration, or more specifically, twilight duration, or presenting any type of time or twilight duration based on a coordinate position in latitude and longitude.

Rosevear discloses a display which presents the current time and a vertical band of twilight represented by grey at separate positions on a screen (col. 4, ln. 10). Not only does Rosevear disclose presenting the current time at a separate location on the clock face from the vertical band which represents twilight, Rosevear fails to disclose, teach, or suggest using pie-shaped sections on a clock face to show the duration for twilight. Although the Examiner contends that it would have been obvious to modify the shaded sections disclosed in Rosevear to make them pie-shaped "because a person having ordinary skill in the art would recognize that providing additional information in the form of twilight times would allow a traveling user to be advised of the light conditions at their destination point", none of the prior art references disclose, teach, or suggest presenting pie-shaped sections for twilight.

Eo et al. discloses that time for sunrise, sunset, and the current time are indicated by a line extending from the center of the timepiece to the end portion of a plate on the time piece (col. 4, ln. 10). Not only does Eo et al. fail to disclose, teach, or suggest twilight and its duration, but Eo et al. does not disclose, teach, or suggest pie-shaped sections for twilight which represent a duration having a first 28 and a second 30

boundary as disclosed in the present application. Although Rosevear discloses presenting the current time and a vertical band of twilight represented by grey on a screen (col. 4, ln. 10), Rosevear does not disclose, teach, or suggest pie-shaped sections for twilight.

Additionally, the apparatus as disclosed in Eo et al. would not function if pie-shaped sections for twilight were included. The apparatus disclosed in Eo et al. uses the bottom plate and the lines which extend from the center to indicate the time for sunrise and sunset. Because twilight is a span of time which varies based on the day of the year, this varying span of time for twilight could not be included on the bottom plate of the apparatus disclosed in Eo et al.

Rosevear further discloses an apparatus for displaying time for the beginning and ending of twilight and sunrise and sunset for each calendar day of the year corresponding to various area codes. Those skilled in the art will appreciate that while a coordinate position is known to those skilled in the art to be a finite geographic position, determined by latitude and longitude, a geographic position, determined by an area code, is not a finite position. The number of possible geographic positions based on a single area code is virtually infinite. This is because a single area code can span upwards of several hundred square miles and even different time zones. For example, the entire state of Idaho has an area code of 208. However, Idaho is split into two time zones (specifically, Mountain Time and Pacific Time). Depending where a person is located in Idaho, they may end up receiving a time and a time for twilight and sunrise and sunset which is incorrect by at least one hour.

Parker discloses an alarm system which automatically adjusts activation and deactivation times of an alarm system based on the current sunrise and sunset times for a given geographic location of the alarm panel which includes a coordinate position based on latitude and longitude (col. 3, ln. 25). The Examiner contends that it would be obvious

to modify Eo et al. in view of Parker to provide the time for twilight and sunrise and sunset for various coordinate positions based on latitude and longitude or based on area code. Although Parker discloses determining sunrise and sunset times based on a coordinate position, Parker fails to disclose, teach, or suggest determining the twilight duration based on the coordinate position. Parker further fails to disclose, teach, or suggest presenting the twilight duration as pie-shaped sections on a clock face.

Therefore, it is respectfully submitted that the Examiner has failed to provide any suggestion or motivation to combine Eo et al. with specific features of Rosevear and Parker to arrive at the subject invention as claimed.

#### ***Failure to Disclose Every Element***

Even if the combination of Eo et al. with Rosevear and Parker is deemed to be proper, the *prima facie* case of obviousness has not been established because the combination does not disclose, either expressly or inherently, each and every feature of the claimed invention.

As admitted by the Examiner, Eo et al. fails to disclose the time for the beginning and ending of twilight; receiving and registering various positions based on a current coordinate position in latitude and longitude for a current calendar day; and pie-shaped sections on the analog clock face for twilight. Rosevear similarly fails to disclose displaying pie-shaped sections for the beginning of twilight on an analog clock face for various coordinate positions in latitude and longitude. Parker also fails to disclose displaying the current time and the time for the beginning and ending of twilight as pie-shaped sections on an analog clock face for various coordinate positions in latitude and longitude.

Since each and every feature claimed is not disclosed, taught, or suggested, it is



respectfully submitted that the 35 U.S.C. §103(a) rejection is improper as to claims 1 and 7 and the rejection should be withdrawn. Therefore, claims 1 and 7 are believed to be allowable. Claims 2, 4, 6, 8, 9, 12-16, 19-21 and 23-26, which depend directly or indirectly from these independent claims, are also believed to be allowable.

Claims 3, 10, and 11 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eo et al. in view of Rosevear and Parker as applied to claims 1 and 7, and further in view of Cash (United States Patent No. 4,759,002). Since claims 3, 10, and 11 depend directly or indirectly from allowable claims, the 35 U.S.C. §103(a) rejection is overcome and claims 3, 10, and 11 are also believed to be allowable.

Claims 5, 17, and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eo et al. in view of Rosevear and Parker as applied to claims 1 and 7, and further in view of Hepp et al. (United States Patent No. 6,449,219). Since claims 5, 17, and 18 depend directly or indirectly from allowable claims, the 35 U.S.C. §103(a) rejection is overcome and claims 5, 17, and 18 are also believed to be allowable.

Claim 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Eo et al. in view of Rosevear and Parker as applied to claims 1 and 7, and further in view of Richins (United States Patent No. 5,907,523). Since claim 22 depends directly from an allowable claim, the 35 U.S.C. §103(a) rejection is overcome and claim 22 is also believed to be allowable.

The remaining references cited but not applied to the claims have been considered. Since the Examiner has apparently considered these references as less pertinent than the above discussed references, further discussion of the non-applied references, at this time, is considered unnecessary. However, it is respectfully submitted that the claims in the subject application patentably define over all references of record either independently or in combination.

Accordingly, it is respectfully submitted that the Application, as amended, is now presented in condition for allowance, which allowance is respectfully solicited. Applicant believes that no fees are due; however, if any become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789. Further and favorable reconsideration of the outstanding Office Action is hereby requested.

Respectfully submitted

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